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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/635,983

08/07/2003

Kenneth Allen Windhorst

C-7220

3873

7590

06/02/2006

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EXAMINER

PUTTLITZ, KARL J

ART UNIT

PAPER NUMBER

1621

DATE MAILED: 06/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/635,983	WINDHORST ET AL.	
	Examiner	Art Unit	
	Karl J. Puttlitz	1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/26/2006 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims have been amended to require combining a finished organic compound with water. However, the term "finished" in connection with the recited organic compound is indefinite since it is unclear how the term modifies the organic compound, e.g., purified, reacted, etc.

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The rejection under section(s) 102/103 is maintained and repeated below:

Claim Rejections - 35 USC §§ 102, 103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over (U.S. patent No. 3,214,347 to Grekel et al. (Grekel)).

The rejected claims are drawn to, inter alia, a process for preparation of an organic compound selected from the group consisting of carboxylic acids, ketones having boiling points from 154 C to 170 C, and esters having boiling points from about 168 C to about 250 C, comprising combining the organic compound with water to form a mixture of the organic compound and water comprising from about 100 ppm to about 50,000 ppm water. The claims have been amended to require that the organic compound has a stable APHA color value of 15 or less. See claim 1

The rejected claims also cover those embodiments comprising removing a product stream comprising the organic compound from a reaction zone in which the organic compound is prepared and introducing the product stream into a distillation column having a lower portion and an upper portion wherein the upper portion and the lower portion are maintained at a temperature of about 23 C to about 250 C and at a pressure of about 10.1 kPa to about 202.6 kPa, and combining the recovered organic compound with water to form a mixture of the organic compound and water comprising from about 100 ppm to about 50,000 ppm water. See claims 10 and 14.

Grekel teaches a singular embodiment in Example 1 wherein an aqueous mixture of crude acids containing isobutyric acid and n-butyric acid is subjected to distillation in a conventional fractionation column. The temperature employed at the bottom of the column is about 175 C. (440 mm.) and the top tower temperature is about 132 C. (300 mm.). From the base of the column a stream is removed that contains approximately 2 percent of the n-butyric acid present in the original feed. A second column containing only water is then started up under total reflux, after which the aforesaid distillate is used as feed. Water is removed from the column under refluxing conditions. Distillate is brought overhead and allowed to stratify into an upper organic layer that contains 4 percent of the n- butyric acid present in the aforesaid original feed. The n-butyric acid is then further purified by distillation to a APHA color value of 5. See description bridging columns 1 and 2.

The difference between the process set forth in the rejected claims and the process set forth by Grekel is that Grekel fails to specifically teach the at the end of the

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disclosed process, water is combined with butyric acid. However, given the broadest reasonable interpretation of the term “combing” in the context of the instant claims, those of ordinary skill would consider the disclosed steps in Grekel of adding a stream comprising n-butyric acid to the second column and further purifying n-butyric acid as combining with water. See M.P.E.P. § 2111 (“During patent examination, the pending claims must be “given *>their< broadest reasonable interpretation consistent with the specification.” >*In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000).<”).

Therefore, the step of combining an organic compound with water is well within the motivation of those of ordinary skill, based on Grekel, and therefore, the claims are anticipated within the meaning of section 102, or prima facie obvious under section 103, since this reference teaches the elements of the rejected claims with the requisite particularity and with a reasonable expectation of success.

The claims have been amended to require combining a finished organic compound with water. However, Grekel still teaches the steps of combining butyric acid, which has been previously purified, with water in a column to produce a feed with the required color value. Given the broadest reasonable interpretation of the term “finished”, the reference teaches combining purified (i.e., “finished”) butyric acid with water.

With regard to the claimed requirement of an APHA value “after being boiled for at least one hour at one atmosphere of pressure”, those of ordinary skill would expect that the product of Grekel would have the same characteristics, since it was prepared in

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substantially the same way, see MPEP 2112.01 ("When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990)."). Thus far there is no objective evidence on the record indicating that the butyric acid produced by Grekel would not have the required color value if boiled for at least one hour at one atmosphere of pressure, see *Id* ("Therefore, the *prima facie* case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product.").

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl J. Puttlitz whose telephone number is (571) 272-0645. The examiner can normally be reached on Monday to Friday from 9 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman K. Page, can be reached at telephone number (571) 272-0602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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